Abstract

The present invention relates to a method for isolating fetal cells from maternal blood,

wherein the blood sample has not been substantially enriched, such as by performing,

on a sample of maternal blood from which at the most 50 % of the anucleated material

cells thereof and/or at the most 50 % of the nucleated maternal cells thereof have been

removed, selective labelling of fetal cells in the maternal blood sample, identifying the

selectively labelled fetal cells, and specifically isolating substantially only the selectively

labelled fetal cells. The selective labelling may be

conducted with antibodies specific for the fetal cells and/or probes hybridising for

example with fetal mRNA. Also, the invention relates to a method of diagnosing a

isease in a fetus comprising obtaining a blood sample from the woman pregnant with

said fetus, whereby at most 50 % of the maternal nucleated cells have been removed

and/or at most 50 % of the maternal anucleated cells have been removed from said

blood sample, selective labelling the fetal cells in the maternal blood sample, identifying

the selectively labelled fetal cells, specifically labelling with at least

one disease marker the identified fetal cells for diseases, and identifying specifically

labelled cells. The specifically labelling may then be conducted with a marker, such as a

probe, to a gene or a gene mutation specific for the genetic disease or a chromosome

abnormality to be diagnosed.